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- (54) Automobile Door Lock Striker
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(57) [Claim for Utility Model Registration]

An automobile door lock striker, characterized by that an engaging pillar that engages with a latch of a door lock main body is integrally erected substantially at a right angle from an attaching plate; two symmetrical walls that are provided with an engaging hole for the latch are integrally formed with a gap provided therebetween; and an elastic body is inserted and fixed in the gap such that a buffer portion that comes in contact with and engages with the latch is exposed from the engaging pillar.

[Detailed Description of the Device]

The invention relates to a striker that is normally fastened to a vehicle body of an automobile and engages, by a door closing operation, with a latch of a door lock main body provided on a door.

According to a related art, this type of a striker has, as a measure to improve a door closing sound of an automobile and to prevent looseness of the door in vertical and lateral directions, an elastic body is fitted to an engaging pillar that engages with a latch of the door lock main body such as by wrapping a rubber or covering with synthetic resin. However, the engaging pillar is made separately from an attaching plate which serves as a base plate that attaches to a vehicle body. Thus, a thermal crimping or

other methods such as post-crimping welding are generally used as a measure to attach the engaging pillar to the attaching plate. Therefore, the elastic body needs to be fitted after the striker main body is completed, which accompanies a poor-workability work such as wrapping or covering. In addition, the attaching strength of the elastic body is also poor. Consequently, the striker in accordance with the related art involves a various drawbacks.

Therefore, in order to solve the aforementioned drawbacks, it is an object of the invention to provide an automobile door lock striker with improved workability and an increased peel strength of the elastic body by forming the engaging pillars, in a form of symmetrical walls, which integrally erect from the attaching plate substantially at a right angle, with a gap provided between the walls, and fitting the elastic body in the gap.

Hereinafter, the embodiments of the present device are explained with reference to the attached drawings.

A striker 10 as shown in FIG. 1 has a wall 12 that serves as a engaging pillar integrally erected from an attaching plate 11, and a wall 14 that integrally erects from an attaching plate 13 symmetrically to the attaching plate 11 in a lateral direction. The wall 12 and the wall 14 are fixed together by a fixing member 15 with a certain gap 16 provided between the wall 12 and the wall 14.

Numerical symbols 17 and 18 represent engaging holes in which a latch (not shown) of the door lock main body is inserted and engaged, and numerical symbols 19 and 20 represent installation holes to a vehicle body.

Front ends 12a and 14a of the walls 12 and 14 are the portions with which the latch comes into contact first and fixedly engages. An elastic body 21 shown in FIG. 2 is provided to the front ends 12a and 14a to prevent looseness.

Hereafter, a description of the elastic body 21 is given.

The elastic body 21 is integrally formed of a buffer portion 22 for preventing looseness and buffering impact, a base portion 23 that is accommodated in the gap 16, and an engaging piece 24 that engages with the engaging holes 17 and 18.

In addition, the base portion 23 is provided with a through-hole 25 for the fixing member 15.

To fit the elastic body 21 to the striker 10, the base portion 23 of the elastic body 21 is inserted in the gap 16 between the walls 12 and 14 so that the buffer portion 22 fits the front ends 12a and 14a of the walls 12 and 14 and the engaging piece 24 fits the engaging holes 17 and 18, respectively. Thereafter, the fixing member 15 is inserted through the through-hole 25 to complete the fixing of the fixing member 15.

In this manner, as shown in FIG. 3, the elastic body 21 can be fitted to the striker 10.

FIG. 4 shows a modified example in which the structure of the elastic body 21 in FIG. 2 is changed to an elastic body 21a such that an engaging piece 24a is extended from a buffer portion 22a so as to wrap around a base portion 23a.

FIG. 5 shows a modified example in which the structure of the elastic body 21 in FIG. 2 is changed to an elastic body 21b in which the buffer portion 22 is provided with a hole 22b so that a spring constant of the buffer portion 22 can be changed easily to a predetermined value.

FIG. 6 shows a modified example in which the elastic body 21 in FIG. 2 is changed to an elastic body 21c structured such that the elastic body 21 is fitted all around the periphery of the engaging pillar.

Next, strikers 30 and 40 as shown in FIGS. 7 and 8 has a structure that does not need the fixing member 15 that is required for the striker 10, and the two walls which serve as engaging pillars are formed continuously in one piece.

First, a description will be given of the striker 30. A wall 32 that serves as the engaging pillar erects substantially at a right angle from an attaching plate 31, and a wall 33 is formed continuously from and integrally with the wall 32 in such a manner as to have a certain gap 34 therebetween. An attaching plate 35 extends substantially at a right angle from the wall 32.

Numerical symbols 36 and 37 represent engaging holes 38 and 39.

As shown in FIG. 9, an elastic body 50 which is fitted to the striker 30 has a base portion 51 that is accommodated in the gap 34, a buffer portion 52, and an engaging piece 53. A hole 54 corresponds to the engaging holes 36 and 37.

Furthermore, the elastic body 50 is fitted to the striker 30 by inserting the base portion 51 into the gap 34 and latching the buffer portion 52 and the engaging piece 53 with the both ends of the walls 32 and 33, respectively.

In addition, a striker 40 as shown in FIG. 8 is different from the striker in FIG. 7 only in that a gap 41 of the engaging pillars of the striker is shaped in a wedge form. An end of the striker-entering opening of the door lock main body is normally formed wide open. Therefore, the striker 40 has its rear side (right side in FIG. 8) widened to facilitate the prevention of door looseness. Naturally, a base portion 61 of an elastic body 60 which is fitted to the striker 40 is formed in the wedge form to fit the gap 41, and the wedge can serve as an engaging piece that engages with the engaging pillars. In consequence, there is no particular need to form the engaging piece.

As described above, in accordance with the present device, the engaging pillars of the striker are integrally formed of two walls with a certain gap provided

therebetween. The elastic body can be fitted to the striker simply by inserting the elastic body in the gap in such a manner that the buffer portion that comes in contact and engages with the latch is exposed from the engaging pillars. Consequently, a fitting work with a poor workability such as wrapping and covering can be eliminated, and in addition, the elastic body is given a latching function. Therefore, excellent effects in practical use such as a high peel strength and durability can be obtained.

[Brief Description of the Drawings]

FIG. 1 is an explanatory drawing which illustrates a first embodiment of a striker shape of the present device. FIG. 2 is an explanatory drawing which illustrates an example of an elastic body of the present device. FIG. 3 is an explanatory drawing which illustrates an installation state of the elastic body of the present device. FIGS. 4, 5 and 6 are explanatory drawings which illustrate modified examples of the elastic body as shown in FIG. 2. FIG. 7 is an explanatory drawing which illustrates a second embodiment of the striker shape of the present device. FIG. 8 is an explanatory drawing which illustrates a third embodiment of the striker shape of the present device. FIG. 9 is an explanatory drawing which illustrates an elastic body used for the striker in FIG. 7. FIG. 10 is an explanatory drawing which illustrates an elastic body used for the striker in FIG. 8.

10... STRIKER

12, 14... WALLS

16... GAP

21... ELASTIC BODY

22... BUFFER PORTION

23... BASE PORTION

24... ENGAGING PIECE